Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Price Cap Performance Review	)	CC Docket No. 94-1
for Local Exchange Carriers	)	
	)	

COMMENTS
OF
THE LINCOLN TELEPHONE AND TELEGRAPH COMPANY

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EXECUTIVE SUMMARY

The goal of price cap regulation should be to mimic a competitive market in an administratively simple manner and to provide incentives for Local Exchange Carriers ("LECs") to become more productive. This will result in the most benefits for consumers.

The Christensen TFP Study filed by USTA represents the most economically correct method to measure LEC productivity changes. Other methods, such as Historical Revenue and Historical Price, are not economically sound because they rely upon Part 32 and 69 separations rules. Also, they are not administratively simple because they include adjustments that are likely to be very controversial between interested parties. No adjustments need to be made to a TFP study because all significant factors will have been measured. Any adjustments made to TFP results that attempt to recapture perceived benefits are based on incorrect assumptions regarding the separability of the input function.

LEC input prices, while very volatile in the short term, will trend towards the national average. Competition will only force prices to meet the general trend in input prices, not result in year to year price swings. Since 1990, the difference between LEC and national input price trends, shown by the staff for the 1984-1989 period, has disappeared. Therefore, there is no basis for the inclusion of a fixed input price component. The Commission should weigh carefully the inclusion of input prices because it moves price cap regulation closer to rate of return regulation and may eliminate the incentive for LECs to become more productive.

The direct method of regulating prices is preferable to the inflation less X-Factor method, currently in use, because it will allow the timely recognition of LEC productivity changes in the price cap rates. No matter which method is selected all components should be calculated over the same period and updated concurrently.

The LEC price cap plan needs to have at least one option below the industry average. A single option plan would force all LECs to generate the same level of productivity growth without regard to their ability to do so. Competition will not force LECs to meet national averages of productivity but rather to meet the productivity inherent in their respective markets. Lincoln is aware that additional safeguards will be needed at a lower X-Factor option and therefore proposes an economic sharing requirement. This economic sharing requirement can be eliminated as competition continues to develop and will not interfere with the removal of competitive services from price cap regulation.

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**COMMENTS
OF
THE LINCOLN TELEPHONE AND TELEGRAPH COMPANY**

The Lincoln Telephone and Telegraph Company ("Lincoln"), by its attorneys, hereby

submits its comments in the above-captioned proceeding. Lincoln is combining related issues from

the 2nd Further Notice[1] and 4th Further Notice[2] as permitted under the Order on Motion for

Extension of Time[3].

I. INTRODUCTION

In this rulemaking, the Commission is seeking comment on various components of

the LEC price cap plan including the calculation of the X-Factor, the number of X-Factor options,

the common line formula, and exogenous cost rules[4]. The Commission also seeks comment on the

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[1] Price Cap Performance Review for Local Exchange Carriers, Second Further Notice of
     Proposed Rulemaking, CC Docket No. 94-1, FCC 95-393, released September 20, 1995.
     ("2nd Further Notice")

[2] Price Cap Performance Review for Local Exchange Carriers, Fourth Notice of Proposed
     Rulemaking, CC Docket No. 94-1, FCC 95-406, released September 27, 1995. ("4th
     Further Notice")

[3] Price Cap Performance Review for Local Exchange Carriers, Order on Motion for
     Extension of Time, CC Docket No. 94-1, DA 95-2340, released November 13, 1995.
     ("Order on Motion for Extension of Time")

[4] 4th Further Notice at ¶12.

effect competition should have on different aspects of the price cap plan.[5] In particular, the Commission seeks comment on the development of X-Factors that are economically meaningful, pass ongoing reductions in LEC unit costs through to consumers, and are reasonably simple to calculate and based upon accessible and verifiable data.[6] In other words, the price cap plan should attempt to mimic a competitive market in an administratively simple manner. Lincoln supports this endeavor and proposes herein various components of a price cap plan that will help achieve these goals. Lincoln's comments are organized in a manner consistent with the presentation of the issues in the 4th Further Notice.

II. Total Factor Productivity (Issue 1)

A. The Christensen Study

The Total Factor Productivity ("TFP") study performed by Christensen Associates ("Christensen Study") placed in the record by the United States Telephone Association[7] ("USTA") is by far the best measure of LEC productivity changes. Christensen Associates are well known and widely respected for their work on economic measures of productivity. The Christensen Study is the culmination of nearly two years of work and is premised on sound economic principles that accurately represent LEC industry average productivity changes. Further, each aspect of the Christensen Study was developed based upon the need to use accessible, verifiable data in a sound economic manner. It is important to note that most current measures of LEC operations are

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[5] 2nd Further Notice at ¶161 and Order on Motion for Extension of Time at ¶3.

[6] 4th Further Notice at ¶16.

[7] This refers to the updated and simplified Christensen TFP study that USTA filed with its comments on December 18, 1995.

accounting measures not economic. The Commission's goal of an economically meaningful price

cap plan is not served by imposing de-facto rate of return regulation through the use of uneconomic

measures.

The Christensen Study also contains important simplifications, primarily in the areas

of current capital cost and capital prices. Developing capital input quantity is a more complicated

process than for the other input components because LEC booked plant balances represent many

years of accumulated investment, with the majority of the investment occurring in years prior to the

period measured by the Christensen Study. As a result, the Christensen Study is forced to calculate

the current capital cost by restating booked plant balances in constant dollar terms in order to remove

the effect of purchase prices over time and then adjusting for economic depreciation. This is a

difficult task as typically booked plant balances need to be categorized by vintage year and then

Telephone Plant Indices ("TPIs"), measures of capital prices, and economic depreciation rates are

used to determine current capital costs. TPIs are also necessary to deflate gross additions and to

measure capital gains or losses on plant assets. TPIs are developed by individual companies and are

based on data that is highly sensitive and cannot be independently verified. Unfortunately, several

companies, including Lincoln, lack vintage schedules of plant balances as well as the capability to

develop TPIs. Therefore, the Christensen Study uses an adjustment factor, developed from a ratio

of booked plant balances to economic capital value from the Bureau of Labor Statistics U.S.

economy TFP study, to translate LEC booked plant balances to economic capital value. The

Christensen Study also uses national producer price indices ("PPIs") in lieu of TPIs to measure

capital values and quantities. These simplifications are crucial to ensure that price cap X-Factors

include data from all companies and are based upon data that is accessible and verifiable.

Furthermore, these simplifications have a *de minimis* effect on the study results, as demonstrated in the Christensen Associates affidavit included in the USTA comments.

B. Input Price

As asserted by USTA and its consultants, the input price differential will trend to zero. However, in the short term, input prices are highly volatile, and therefore inappropriate for predicting future levels of input prices. Telecommunication markets are not commodity markets that experience wild price swings. As a result, competition will not force wild price swings upon LEC markets based on short term aberrations in LEC input prices. At the very most, prices in a competitive market will incorporate the general trend in input prices. Long distance markets, that should be subject to similar trends in input prices, have not exhibited excessive volatility in toll prices.

Also, the original Christensen Study[8] was developed to produce an accurate measure of productivity but not to produce a meaningful measure of input prices. An analogy could be the waste water from a nuclear power plant. It is a by-product of the process, but you wouldn't want to drink it. It is inappropriate to use the original Christensen study to calculate LEC input price changes because it was not designed to produce an economically valid measure of input prices. Input prices are merely a by-product of the process.

Given the historical experience with input prices, in all probability, LEC input prices will be greater than the national average at some point in the future. If input prices are included in

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[8]   Originally filed in USTA's May 9, 1994 comments in the first phase of this proceeding and then updated by Letter from Mary McDermott, USTA, to William F. Caton, FCC, dated January 18, 1995.

the price cap X-Factor, it should be understood that input price may not always result in price reductions and in fact may result in price increases. Also, in the long term, the accumulated change in LEC input prices reflected in price caps rates should be nearly equal to the accumulated change in national input prices.

Additionally, the Commission seeks comment on whether the trend in LEC input prices has changed since divestiture.[9] Lincoln believes the trend in LEC input prices has **not** changed since divestiture. In the First Report and Order,[10] the Commission staff regressed both Christensen's and NERA's time series of telephone industry input prices against time series of U.S. input prices, interest rates, and a dummy (binary) variable for divestiture from 1984-1992.[11] Both regressions have a dummy for divestiture with a statistically significant coefficient. However, further analysis of both cases shows that when the divestiture dummy variable was used from only 1984-1989, the significance of the regression statistics increase dramatically, as demonstrated in Attachment A.[12] Using the dummy variable for the period 1984-1989 explains the highest proportion of the variance in LEC input price growth, as defined in Appendix F, than when used for any other period of time. Specifically, while the regression of Christensen's time series indicates that a shift in the function for determining LEC input prices occurred in 1984, it does not indicate that this shift was a permanent one. The alternative specification of the model, using a dummy

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[9]   4th Further Notice at ¶57.

[10]   *Price Cap Performance Review for Local Exchange Carriers*, First Report and Order, CC Docket No. 94-1, FCC 95-132, released April 7, 1995. ("First Report and Order")

[11]   *See* Appendix F, First Report and Order.

[12]   *See* Attachment A, Pages 2 and 5.

divestiture variable for only the period of 1984-1989, produced a higher R^2, .56 versus .43, a higher F statistic, 16.72 versus 10.15, and higher t-statistics on all independent variables. The higher R^2 indicates that when the divestiture dummy was used only for the 1984-1989 period, the model explained a higher proportion of the variation in LEC input price growth. While F statistics indicate that both models are statistically significant in explaining the variation in LEC input price growth, the model using the dummy variable from only 1984-1989 has a higher degree of significance. These statistics indicate that the effect observed is not permanent.

Next, Lincoln regressed LEC input prices against U.S. input prices, interest rates, a dummy variable for 1984-1989, and another dummy variable from 1990-1992[13] to test the hypothesis that the trend in LECs input prices from 1990 to 1992 was different from the pre-divestiture trend between 1949-1983. The resulting coefficient for the 1990-1992 dummy variable was not significant, proving that LEC input price changes from 1990-1992 are not statistically different from the pre-divestiture trend.

This analysis supports a conclusion that while there was a difference between LEC and U.S. input inflation during the 1984-1989 time period, beginning in 1990 the long term historical trend in LEC input price growth has resumed. Clearly, the data does not support a finding that the trend in LEC input prices has permanently changed since divestiture. Further, any one-time benefits that LECs received from lower input price growth during the 1984-1989 period were recaptured under rate of return regulation and partially recaptured again in the price cap productivity offset through its reliance on the historical price model. Since all post-divestiture input price differential

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[13] *See* Attachment A, Pages 3 and 6.

benefits have been recaptured and the pre-divestiture input price trend has resumed, there is no basis for the inclusion of any permanent or fixed input price component in the price productivity offsets.

C. Direct Measurement of LEC Unit Cost Changes

As the Commission noted in the First Report and Order,[14] in competitive equilibrium, LEC output prices can be based on LEC input prices and LEC productivity, without the need for any U.S. aggregate data for prices or productivity. This means that a price cap index is changed by an amount equal to the change in LEC input prices minus the change in LEC productivity. Further, as the Commission recognized, the current inflation less X-Factor method does require measures of growth for the U.S. economy. To the extent that measures of U.S. economy growth rates are not published until a year or more after occurrence, the Commission should limit use of such measures. A significant lag does not allow changes in LEC productivity to be reflected in price cap rates until long after occurrence. This lag will reduce the likelihood of future changes in LEC productivity growth mimicking the growth reflected in price cap indices. In a price cap plan that includes a measure of input prices, relying solely on a direct measure of LEC productivity is preferably to the inflation less X-Factor method because it will allow for more timely recognition of changes in LEC productivity. However, before the direct method can be adopted, the Commission must address issues related to input prices.

The direct method can be further simplified as demonstrated in Attachment B. The percentage change in LEC output prices can be set equal to the percentage change in LEC input cost

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[14]   *See* Appendix F, First Report and Order.

growth minus the percentage change in LEC output quantity.[15]   This eliminates complexities in the

Christensen Study related to the measurement of capital input quantities. However, Attachment B

also demonstrates that the direct method may yield results similar to the rate of return or price cap

conditions depending upon certain assumptions. This can be seen by examining equation (12) of

Attachment B. In equilibrium, it is assumed that return component is included in the input cost term.

If we assume that return is fixed, differences in the percentage change of the remaining input cost

components and the percentage change of output demand will cause prices to change. This is the

rate of return condition. If return is allowed to fluctuate and prices are capped we have regulation

that approaches the price cap condition. Equation (12) can also be used to illustrate the possible

effects of incorporating input prices into the model. It is reasonable to assume that the purpose of

including input prices is to reduce the possibility of LECs realizing uneconomic returns. So, input

prices may have the effect of controlling return by allowing output prices to fluctuate, producing a

result that approaches the rate of return condition.

The record demonstrates that the inclusion of short term measures of input prices will

lead to price volatility.[16]   Thus, the inclusion of input prices may move interstate access regulation

more to rate of return regulation and further from pure price caps. The Commission, therefore,

should be cautious when considering including an input price measure in the price cap plan. A price

cap plan must include reasonable earnings incentives for LECs to increase productivity, so that these

productivity increases can then lead to lower prices for end users.

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[15]   *See* Equation (12), Attachment B at 1.

[16]   USTA Reply Comments, Attachment 4 at 26-28 filed June 29, 1994.

D. Adjustments to TFP

The Christensen study cannot be separated into an interstate-only measure of LEC productivity changes. An interstate-only study cannot be performed because there exists no way to separate joint costs in an economically meaningful manner. If one component of the TFP study, in this case the input function, is not economically meaningful because of the application of uneconomic accounting and separation rules, then the entire study is not economically meaningful. The Christensen Study, because it measures total company cost, inherently includes a measure of interstate cost growth.

Further, neither can adjustments be made for interstate demand growth or common line minute growth because adjustments to the output side of the Christensen Study make an inherent assumption regarding the separability of the input function. If price cap X-Factors are changed because the LEC industry is believed to have experienced higher interstate demand growth, it assumes that interstate costs are growing at the same rate as non-interstate costs. This is not a valid assumption. If the interstate input function could be separated from the total company input function in a economically meaningful manner, it may reveal that interstate costs are growing faster than non-interstate costs and, therefore, the appropriate adjustment would lower the X-Factor. As long as there is no way to separate the input function in an economically meaningful manner, adjustments based upon differing growths between the various output categories is incorrect and not appropriate. Also, the Christensen Study already measures all LEC productivity changes, including interstate demand growth and common line minute growth.

III. <u>Alternative X-Factor Calculation Methods (Issue 2)</u>

The Commission asked for comment on other methods of calculating price cap X-Factors, particularly the historical revenue method, placed in the record by AT&T, and the historical price method, used by the Commission in the past proceedings to help set X-Factors.[17]   Both of these studies are based on the accounting and separations rules underlying rate of return regulation. As discussed above, any method that relies on Part 36 and 69 accounting and separations rules to measure LEC productivity changes is inappropriate and fails at least one prong of the Commission's requirements for X-Factor methods because they are not economically meaningful. In addition, the historical revenue and historical price methods are not administratively simple because they include subjective measures of the effects of changes in accounting rules, particularly the effects related to demand stimulation. LEC unit cost changes, when calculated on a total company basis, measure the actual effect of these changes and therefore will not require extensive Commission moderation on the correct method to account for changes in the Part 36 and 69 rules or other exogenous matters.

It is also inappropriate to add a consumer productivity dividend ("CPD") to a productivity measure calculated on a rolling average basis. All LEC productivity changes will be returned to consumers in a price cap plan that incorporates productivity changes on a rolling average basis. A CPD would only serve to double count LEC productivity changes.

IV. <u>Updating the X-Factors (Issue 3)</u>

All components of the price cap plan should be calculated over the same period and updated concurrently. It is inconsistent to base one component of the X-Factor on a moving average

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[17]   4th Further Notice at ¶¶77-93.

and another component on fixed historical base. All components of the X-Factors should be measured on a five year moving average basis. This length of time most closely approximates the historical length of the LEC business cycle and, as a result, will further limit excessive volatility in LEC output prices and be more representative of a competitive market.

V. Number of X-Factors (Issue 4)

The Commission correctly recognizes that there is increasing differentiation among LECs and that a single X-Factor plan is not appropriate.[18] Multiple options are necessary to reflect the heterogeneity of price cap LECs. A multiple option price cap plan that provides an option, with appropriate safeguards, that is a fixed percentage below industry average productivity level, will most closely mimic the restraints that competition will place on individual LECs in their respective markets.

Competition will not impose a national average of productivity upon LECs, particularly smaller LECs that operate in limited geographic regions. In a competitive market, a local carrier will need to meet the unit cost changes of national firms in certain areas of input cost growth, such as administration and capital costs, but not in others areas, such as network resources and in terms of output quantity growth. These areas are unique to the relevant markets and can differ significantly from national averages. The imposition of a single national average X-Factor implies that if output quantities for the industry are growing at a given percentage, then output quantities should be growing at the same percentage for all LECs. Further, it implies that local and mid-sized

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[18]   First Report and Order at ¶165; 4th Further Notice at ¶109.

regional carriers must attain the same economies of scale and density of demand as the national average. Both implications are not true and may not be possible.

Another option is the assignment of individual company X-Factors. This is totally inappropriate and would move regulated markets further from mirroring a competitive market. Competitive equilibrium would force a firm not to meet its own productivity but to meet that of its competitors. Assignment of individual X-Factors removes any incentive to operate more efficiently and gives the LECs some ability to determine their X-Factors by controlling input costs and output quantities.

Therefore, an interstate average X-Factor is the most correct method of measuring the price discipline that a competitive market will enforce on LECs. Making the industry average the only X-Factor option is not appropriate. However, the industry average, as calculated by the Christensen Study, provides a sound basis for the crafting of an economically meaningful price cap plan. An average indicates that there will be firms above the average and below the average. So when applying the industry average, the Commission needs to ensure that LECs on either end of the spectrum neither benefit nor are harmed excessively. LECs above the industry average already have a built-in safeguard because, to the extent LECs have high margin services and markets and do not lower prices accordingly, competition will target these areas. LECs below the average have no built-in safeguard and therefore must be afforded the opportunity to elect a lower X-Factor option. However, the Commission must guard against LECs electing a lower X-Factor as a means to continue monopoly pricing. So an economic form of sharing may be needed at the lower X-Factor option. But this sharing requirement should be eliminated as competition continues to evolve.

The Commission currently has three means to ensure that LEC productivity changes are passed through to consumers; competition, the productivity factor, and sharing. Ultimately, competition will evolve to a point that obviates the need for any form of price regulation, effectively eliminating the need for a productivity factor or sharing. Until that time, the primary means of price regulation, in the LEC price cap plan, will continue to be the productivity factor. However, the Commission is faced with how to ensure that each LEC selects the appropriate X-Factor option given its relevant markets and services. As discussed above, an industry average X-Factor incorporates most but not all of the price discipline that competition provides. Therefore, a lower X-Factor is needed for those LECs that, through no fault of their own, cannot achieve the industry average. However, as mentioned earlier, the price cap plan must guard against LECs electing a lower X-Factor for the sole purpose of keeping prices above an economic level. To this end, a form a sharing may be required. Since the current sharing requirements are part of rate of return regulation the Commission is wisely seeking to avoid, Lincoln is proposing an economic measure of earnings, based upon the Christensen Study methodology, as a means to prevent this from occurring. Lincoln has not been able to develop another method that can replace sharing as the means to provide incentives for LECs to elect the correct productivity option. Pricing flexibility has been presented as an alternative but it serves no purpose to penalize LECs that cannot sustain a high level of productivity by denying pricing flexibility at the point in time when all LEC markets are being opened to competition. This would unfairly limit the ability of incumbent LECs to respond to competition and would send incorrect signals to the marketplace, thereby facilitating uneconomic entry.

The Commission, in the 2nd Further Notice,[19] is seeking comment regarding the level of competition needed before price regulation is no longer appropriate. In this same theme, the Commission can use competition at a lesser degree to eliminate the need for sharing on services remaining subject to price cap regulation. Initially, in the two X-Factor plan Lincoln is proposing, there would be no sharing at the upper X-Factor, set at the industry average for reasons discussed above, and an economic sharing requirement at the lower X-Factor, set at 75% of the industry average. The 75% factor is arbitrary but when coupled with the appropriate economic sharing requirement should represent a reasonable lower X-Factor option without the detriments associated with the assignment of individual X-Factors. Then, once a LEC has met a competitive checklist related to the opening of its network to interconnection and has become eligible to streamline a service within a study area, subject to the rules developed in the 2nd Further Notice, the sharing requirement would be eliminated for that study area because competition would then be a viable substitute for sharing. This proposal makes no assumptions regarding any tie between productivity and competition. It only allows competition to substitute for sharing requirements and enables the Commission to eventually eliminate sharing in a multiple X-Factor price cap plan.

This plan gives LECs the ability to elect either option during an annual filing without interfering with any other aspects of the price cap plan. At the point any service is removed from price cap regulation, sharing will have been eliminated. Further, since the economic sharing requirement proposed by Lincoln is tied to price cap revenues rather than costs, there should be no

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[19] 2nd Further Notice at ¶161 and Order on Motion for Extension of Time at ¶3.

concerns that the inclusion of sharing in the LECs price cap plan can adversely effect the removal of services from price cap regulation.

VI. Sharing Requirements and Alternatives (Issue 5)

The lower X-Factor option should include an economic sharing requirement until competition evolves to a point where a sharing safeguard is no longer needed. The starting point for this sharing requirement would be the sum of the total company input costs calculated in the Christensen Study. This value, when multiplied by the ratio of price cap revenue to total company revenue, produces a reasonable baseline for interstate revenues. A LEC would keep the first 2.5% of the price cap revenue above the baseline, share 50% of the next 10%, and then share 100% of price cap revenues more than 12.5% over the baseline amount. These sharing bands approximate the bands at the 3.3 X-Factor option in the original price cap plan and 4.7 X-Factor option in the interim price cap plan. See Attachment C for additional description of this sharing process.

VII. Common Line Formula (Issue 6)

The Christensen Study obviates the need for any carrier common line ("CCL") adjustment. To the extent carrier common line output/demand grows faster than the respective inputs/costs this will be reflected in the measure of LEC productivity. As discussed above, any changes in the X-Factor based upon one source of output growth versus another makes inherent and incorrect assumption about the separability of the input function.

A common line adjustment is not the solution to the problems in carrier common line cost recovery. The Commission needs to open an additional proceeding related to the recovery of non-traffic sensitive common line costs on a per-line basis. This proceeding should set the ultimate

goal of recovery of common line costs from end users through increases in the subscriber line charge caps.

VIII. Exogenous Costs (Issue 7)

The Commission, with the adoption of the Christensen Study and regulating LEC output prices on a rolling average basis, will eliminate the need for most exogenous costs because all changes in LEC unit costs will be reflected in the price cap X-Factors. To the extent costs are not eventually reflected in the X-Factors, the Commission can approve their inclusion in LEC output prices on a case by case basis, similar to current requirements.

IX. Scheduling of Next Performance Review (Issue 8)

The Commission should adopt a price cap plan that will adapt to changes in the marketplace as the provision of LEC services becomes increasingly more competitive. Therefore, a specific review date does not need to be scheduled. This will give LECs a stable form of interstate regulation under which long term plans can be formulated. Issues, not contemplated in the price cap plan, can be dealt with on a case by case basis as necessary.

X. Conclusion
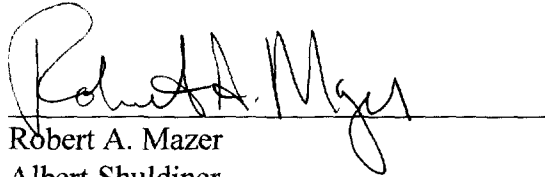
A price cap plan that mimics a competitive market in an administratively simple manner must include the following components. First, the price cap plan must contain at least one additional X-Factor option below the industry average in order to recognize that price cap LECs are becoming increasingly diverse and the competition does not force a company to meet a national productivity average but rather the productivity inherent in its respective markets. Any lower options will need additional safeguards, such as Lincoln's proposed economic sharing requirements, until such time as competition becomes a viable substitute. Next, the X-Factors should be based

upon the result of the Christensen Study because it remains the most economically sound measure of LEC productivity changes. All other methods currently on the record are based on rate of return accounting and separations rules and therefore are not economic measures of productivity. Third, it must continue to contain incentives for LECs to become more productive. Therefore, the Commission must carefully consider the inclusion of input prices in order to avoid the reimposition of rate of return regulation in the guise of price cap regulation. Under de-facto rate of return regulation there are no incentives for LECs to become more productive. Also, it cannot contain a fixed input price adjustment because while there may have been an input price differential from 1984-1989, the long term trend in LEC input prices has resumed. Further, no adjustments should be made to the Christensen study based upon a perception that LECs receive great benefit from interstate output growth because any such adjustment assumes that interstate input costs are growing at the same rate as other aspects of the input function. This assumption is not supported by economic rationale. Finally, all components of the LEC price cap X-Factors must be calculated over the same time period and updated concurrently. It is inappropriate to mix moving and fixed components within X-Factors.

Now is the time for regulation to allow LEC markets to begin adapting to the competitive environment now emerging. The Commission should adopt a forward looking, economically sound price cap plan. Any other choice will reduce the benefits that will be received by consumers. Lincoln urges the Commission to adopt the suggestions contained herein.

Respectfully submitted,

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Attachment A

Telephone Input Price Growth Regression - Christensen Data

1949-1992 w\ Divestiture Dummy 1984-1992

LEC Input Price Change	Year	U.S. Input Price Change	Divestiture Binary Dummy	Yield on Moody's Pub. Util. Bonds	Trend Line	Trend Line Variance (e)	e(t) less e(t-1)
3.2%	1949	-1.0%	0	2.66%	1.1%	2.1%	
5.1%	1950	6.3%	0	2.62%	3.6%	1.5%	-0.56%
8.8%	1951	7.9%	0	2.86%	4.3%	4.5%	3.00%
8.6%	1952	1.2%	0	2.96%	2.1%	6.5%	2.01%
2.4%	1953	3.7%	0	3.20%	3.1%	-0.7%	-7.21%
1.9%	1954	0.6%	0	2.90%	1.8%	0.1%	0.75%
5.4%	1955	6.6%	0	3.06%	4.0%	1.4%	1.35%
1.7%	1956	0.7%	0	3.36%	2.1%	-0.4%	-1.89%
-1.1%	1957	3.7%	0	3.89%	3.5%	-4.6%	-4.16%
3.3%	1958	0.5%	0	3.79%	2.4%	0.9%	5.55%
5.4%	1959	7.0%	0	4.38%	5.0%	0.4%	-0.49%
4.2%	1960	-0.6%	0	4.41%	2.4%	1.8%	1.37%
3.9%	1961	3.6%	0	4.35%	3.8%	0.1%	-1.69%
2.2%	1962	4.4%	0	4.33%	4.0%	-1.8%	-1.96%
1.0%	1963	3.8%	0	4.26%	3.8%	-2.8%	-0.95%
6.0%	1964	4.5%	0	4.40%	4.1%	1.9%	4.67%
0.5%	1965	5.7%	0	4.49%	4.6%	-4.1%	-5.97%
1.1%	1966	4.6%	0	5.13%	4.6%	-3.5%	0.56%
1.9%	1967	2.0%	0	5.51%	4.0%	-2.1%	1.44%
4.2%	1968	4.4%	0	6.18%	5.2%	-1.0%	1.05%
2.1%	1969	3.7%	0	7.03%	5.6%	-3.5%	-2.41%
3.8%	1970	3.3%	0	8.04%	6.1%	-2.3%	1.18%
4.2%	1971	6.8%	0	7.39%	6.8%	-2.6%	-0.37%
8.0%	1972	7.2%	0	7.21%	6.9%	1.1%	3.78%
0.6%	1973	6.3%	0	7.44%	6.7%	-6.1%	-7.24%
5.9%	1974	4.2%	0	8.57%	6.7%	-0.8%	5.28%
14.2%	1975	9.4%	0	8.83%	8.7%	5.5%	6.36%
10.7%	1976	9.1%	0	8.43%	8.3%	2.4%	-3.14%
6.1%	1977	8.6%	0	8.02%	7.9%	-1.8%	-4.16%
7.6%	1978	7.8%	0	8.73%	8.1%	-0.5%	1.31%
7.2%	1979	8.2%	0	9.63%	8.8%	-1.6%	-1.12%
14.6%	1980	6.6%	0	11.94%	9.7%	4.9%	6.45%
11.6%	1981	9.9%	0	14.17%	12.3%	-0.7%	-5.57%
12.1%	1982	3.7%	0	13.79%	9.9%	2.2%	2.86%
12.8%	1983	5.6%	0	12.04%	9.4%	3.4%	1.19%
1.8%	1984	7.4%	1	12.71%	4.7%	-2.9%	-6.25%
0.1%	1985	4.0%	1	11.37%	2.7%	-2.6%	0.33%
1.3%	1986	3.8%	1	9.02%	1.1%	0.2%	2.79%
1.7%	1987	3.1%	1	9.38%	1.1%	0.6%	0.40%
-3.2%	1988	4.4%	1	9.71%	1.7%	-4.9%	-5.56%
-3.7%	1989	4.1%	1	9.26%	1.3%	-5.0%	-0.11%
11.9%	1990	4.2%	1	9.32%	1.4%	10.5%	15.53%
1.3%	1991	2.9%	1	8.77%	0.6%	0.7%	-9.80%
4.4%	1992	5.1%	1	8.14%	1.0%	3.4%	2.76%

Constant	-0.0027
Standard Error of Y	0.0347
R Squared	0.4322
Observations	44
Degrees of Freedom	40

	X Coeff.	Standard Error of Coeff.	T Stat	T Critical Value @ 90%
U.S. Input Price	0.3402	0.2338	1.4553	1.3030
Divestiture, 84-92	-0.0579	0.0152	-3.8142	1.3030
Moody's Bond Yield	0.6489	0.2093	3.1007	1.3030

F Statistic	10.1512
F Critical Value @ 99%	4.3100
Durbin-Watson Critical Value @ 99%	1.4600
Durbin-Watson Statistic	1.8048
Durbin-Watson Critical Value @ 99%	2.5400

Telephone Input Price Growth Regression - Christensen Data

1949-1992 w\ Divestiture Dummy 1984-1989

LEC Input Price Change	Year	U.S. Input Price Change	Divestiture Binary Dummy	Yield on Moody's Pub. Util. Bonds	Trend Line	Trend Line Variance (e)	e(t) less e(t-1)
3.2%	1949	-1.0%	0	2.66%	0.9%	2.3%	
5.1%	1950	6.3%	0	2.62%	3.4%	1.7%	-0.59%
8.8%	1951	7.9%	0	2.86%	4.1%	4.7%	2.98%
8.6%	1952	1.2%	0	2.96%	1.8%	6.8%	2.05%
2.4%	1953	3.7%	0	3.20%	2.9%	-0.5%	-7.23%
1.9%	1954	0.6%	0	2.90%	1.6%	0.3%	0.78%
5.4%	1955	6.6%	0	3.06%	3.8%	1.6%	1.32%
1.7%	1956	0.7%	0	3.36%	1.9%	-0.2%	-1.87%
-1.1%	1957	3.7%	0	3.89%	3.3%	-4.4%	-4.20%
3.3%	1958	0.5%	0	3.79%	2.2%	1.1%	5.57%
5.4%	1959	7.0%	0	4.38%	4.8%	0.6%	-0.55%
4.2%	1960	-0.6%	0	4.41%	2.2%	2.0%	1.40%
3.9%	1961	3.6%	0	4.35%	3.6%	0.3%	-1.71%
2.2%	1962	4.4%	0	4.33%	3.9%	-1.7%	-1.96%
1.0%	1963	3.8%	0	4.26%	3.6%	-2.6%	-0.94%
6.0%	1964	4.5%	0	4.40%	4.0%	2.0%	4.66%
0.5%	1965	5.7%	0	4.49%	4.4%	-3.9%	-5.98%
1.1%	1966	4.6%	0	5.13%	4.5%	-3.4%	0.54%
1.9%	1967	2.0%	0	5.51%	3.9%	-2.0%	1.44%
4.2%	1968	4.4%	0	6.18%	5.2%	-1.0%	1.01%
2.1%	1969	3.7%	0	7.03%	5.5%	-3.4%	-2.44%
3.8%	1970	3.3%	0	8.04%	6.1%	-2.3%	1.14%
4.2%	1971	6.8%	0	7.39%	6.8%	-2.6%	-0.36%
8.0%	1972	7.2%	0	7.21%	6.8%	1.2%	3.79%
0.6%	1973	6.3%	0	7.44%	6.7%	-6.1%	-7.25%
5.9%	1974	4.2%	0	8.57%	6.7%	-0.8%	5.25%
14.2%	1975	9.4%	0	8.83%	8.7%	5.5%	6.33%
10.7%	1976	9.1%	0	8.43%	8.3%	2.4%	-3.12%
6.1%	1977	8.6%	0	8.02%	7.9%	-1.8%	-4.15%
7.6%	1978	7.8%	0	8.73%	8.1%	-0.5%	1.29%
7.2%	1979	8.2%	0	9.63%	8.8%	-1.6%	-1.16%
14.6%	1980	6.6%	0	11.94%	9.9%	4.7%	6.36%
11.6%	1981	9.9%	0	14.17%	12.5%	-0.9%	-5.67%
12.1%	1982	3.7%	0	13.79%	10.1%	2.0%	2.90%
12.8%	1983	5.6%	0	12.04%	9.6%	3.2%	1.25%
1.8%	1984	7.4%	1	12.71%	2.4%	-0.6%	-3.78%
0.1%	1985	4.0%	1	11.37%	0.3%	-0.2%	0.40%
1.3%	1986	3.8%	1	9.02%	-1.4%	2.7%	2.88%
1.7%	1987	3.1%	1	9.38%	-1.4%	3.1%	0.39%
-3.2%	1988	4.4%	1	9.71%	-0.7%	-2.5%	-5.58%
-3.7%	1989	4.1%	1	9.26%	-1.1%	-2.6%	-0.09%
11.9%	1990	4.2%	0	9.32%	7.2%	4.7%	7.22%
1.3%	1991	2.9%	0	8.77%	6.4%	-5.1%	-9.77%
4.4%	1992	5.1%	0	8.14%	6.7%	-2.3%	2.77%

Constant	-0.0062
Standard Error of Y	0.0306
R Squared	0.5564
Observations	44
Degrees of Freedom	40

	X Coeff.	Standard Error of Coeff.	T Stat	T Critical Value @ 90%
U.S. Input Price	0.3454	0.2023	1.7075	1.3030
Divestiture, 84-89	-0.0830	0.0152	-5.4601	1.3030
Moody's Bond Yield	0.6874	0.1786	3.8489	1.3030
F Statistic			16.7233	
F Critical Value @ 99%			4.3100	
Durbin-Watson Critical Value @ 99%			1.4600	
Durbin-Watson Statistic			1.7432	
Durbin-Watson Critical Value @ 99%			2.5400	